DOCUMENT RESUME

ED 259 375 CS 209 142

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TITLE The Technical Writer's Voice: An Empirical Study of "Ethos."
PUB DATE Mar 85
NOTE 17p.; Paper presented at the Annual Meeting of the Conference on College Composition and Communication (36th, Minneapolis, MN, March 21-23, 1985).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adults; Coherence; *Cohesion (Written Composition); Educational Change; Educational Theories; Higher Education; Language Styles; *Reader Response; *Rhetoric; Sentence Structure; *Technical Writing; *Writing Instruction; Writing Research
IDENTIFIERS *Persona; *Writing Style

ABSTRACT

Seven people who both write and read various kinds of reports in their professions were asked to read and respond to identical sets of student reports over a four-month period in order to determine whether they responded to personae. Attached to each unevaluated and unidentified student report was a form with 15 different response areas that measured on a one-to-five scale the reader's response to the writer. Readers' responses showed that they differentiated between competence and character. The medians that reflected measurement of the writers' control over subject matter were relatively high and consistent. But the readers gave their most positive responses to writers whose reports projected a voice of active participation in the subject matter, a visible connection of self and subject. For those writers whose voice was, in comparison, objective, the response medians were lower. The one stylistic strategy that stood out clearly was the use of cohesive ties, especially the use of repetition. The data suggest the importance of the high number of oral elements in the reports that received the highest responses. The use of these oral elements calls for a rhetorical approach to technical communication. (HOD)

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The Technical Writer's Voice: An Empirical Study of Ethos

In our world of specialization and fragmentation with its "objective" and "technological" language, we're increasingly recognizing that rhetoric can help form concentricity out of this fragmentation. We've welcomed the attention to science as rhetoric and to the scientist's voice as no longer a strictly objective one. Now some attention is being given technology and its particular language. In one response, Caroline Miller defines contemporary society's ethos as arising out of its collective consciousness of technology, with its emphasis on conformity and depersonalization (229). The writing that comes from technology, then, reflects a voice impersonal, nonresponsible, narrowminded.

We've talked about trying to change this ethos. In 1980 at this same conference, participants in a technical writing session called for a liberal arts approach. And in 1981 at MLA, another session extended this idea, calling for a rhetorical approach to technical communication. Such attention to needed changes both have come out of and led to research and scholarship in technical writing that focus on rhetorical context. For a representative example, consider the number of articles after 1980 in the Applied Science and

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Technology Index urging writers to become more visible in their writing, to be more conscious of the rhetorical stance.

Responding to this increasing attention to technical communication as rhetoric and all that this implies about persona, I asked eight successful professionals in scientific and technological fields to participate in an empirical study of technical writers.1 My purpose today is to explain this research project and its findings and then to explore its theoretical, analytical, pedagogical implications.

THE RESEARCH

To find out if they responded to personae, I asked seven people who both write and read various kinds of reports in their professions to read and respond to identical sets of student reports over a four-month period. I chose reports for this research that met a certain criteria: conventional report form, interesting subject matter not unfamiliar to the readers, and correctness. Although none of these particular reports had been written out of assignments that focused on voice, I considered them to be above-average examples of conventional report writing in an advanced writing course. Each of the readers is experienced and successful in his or her area of expertise.

1 I am indebted to Mr. Darwin Boesch, Dr. Jo Ann Houts, Mr. Roy Hunt, Ms. Becky Lucas, Dr. John Lucas, Dr. John Richards, and Mr. J. R. Smith for their willingness to read and respond to all of the technical reports. Professor Sallie Strange's help with the response sheet and, especially, compiling statistical data has been invaluable.

Their professions and work vary: an industrial engineer who is vice-president of an export company, a clinical psychologist who is in assessment and therapy, a consulting engineer who also is vice-president and division manager of a machine parts corporation, an attorney who is in private practice, a physician who is in general practice, a physician who is in orthopedic surgery, and an aerospace program manager who works with planning and proposals.

Attached to each unevaluated and unidentified student report was a form with fifteen different response areas that measured on a one-to-five scale the reader's response to the writer. The areas included such statements as "You can put trust in this writer," "The writer is a person of sound sense," "You would delegate some authority or responsibility to this person." The response form was planned so that it would focus on the writer's knowledge of subject and on character rather than on critical analysis or summary.

The aim of my research was to determine not only what part ethos plays in fulfilling readers' expectations but also, if there is a "report" persona, how it is manifested through the rigid conventions of reporting information. I drew from a recent study of source credibility in modern discourse that puts Aristotle's three attributes of ethos--good sense, character, and good will--into two--good sense (intelligence, competence, knowledge of one's subject) and character (veracity and trustworthiness). Good will (one's intention toward the audience) can be subsumed under

character because a perception of the writer's intention depends upon how one perceives the speaker's character (McCroskey and Young 24-34). These two attributes of ethos logically interrelate with persona, the two-way relationship whereby voice is projected by one's participation in and attitude toward the subject and one's tone toward the intended reader. Ethos functions by creating and fulfilling expectations.

The data from the response sheets, which designated individual responses to each report, were analyzed by determining medians. These medians discriminated between the reports eliciting favorable or less favorable responses. Only then did I stylistically analyze the student reports in an attempt to answer some questions. How important are personal pronouns? Active voice? Cohesive ties? Sentence length? Subject-verb order? Is there a "report" voice that differs from other kinds of technical writing? If so, are there differences in what textbooks teach and what real readers say and real writers practice?

ANALYSIS OF DATA AND STUDENT REPORTS

The statistical data compiled from the response sheets did perhaps raise more questions than answers. Most of the findings would probably not surprise you; however, I believe some implications may at least generate other research.

My readers' responses show they do differentiate between the two attributes of competence and character. The medians that reflect measurement of the writers' control

over subject matter are relatively high and consistent. But these readers gave their most positive responses to writers whose reports projected a voice of active participation in the subject matter, a visible connection of self and subject. To those writers whose voice was, in comparison, objective, the response medians were lower.

When I began the close analysis, I found it easy to separate from all the sets those reports where the writers had worked in personal reference words. Those writers also had used considerably more active voice verbs than the others. Standing out within this group of reports with the high measurement of character were three reports, which measured even higher than the others in this high median group. These three reports had no more personal references or active voice than the others in this group. Some even had less. Yet the readers had been quite positive about these writers' voices being a factor either in persuading them or by fulfilling their expectations within a rhetorical context. The readers strongly felt that these writers were aware in more than a superficial sense of the possibility that a real reader might also be participating in this rhetorical context. What were the differences, then, in these three reports that caused the readers to respond favorably to the writer's voice in this way?

A closer analysis showed these three did differ from the rest in other stylistic ways. They had measurably shorter clause length regardless of sentence length, a

finding that certainly supports some research that Jack Selzer has been doing (71-89). Subjects and verbs in the three reports were kept very close together with hardly any separating elements. There were more simple and compound sentences than complex or compound-complex. A high percentage of the sentences were cumulative, with more modifying verbals than strings of prepositions. These three reports also contained more figurative language than the others in the high response group.

Although these findings also probably are not surprising, there was one stylistic strategy that stood out clearly: the use of cohesive ties. In my stylistic analysis of the three student reports, I easily could circle elements that formed a network of cohesive ties both within and between sentences, a network composed of both subordinate and coordinate elements, pronouns, and forms of repetition. The strategies of repetition by far were the most numerous. In fact, probably because of my detailed analysis, the repetition seemed almost distracting in its regularity. Whether the readers sensed these three writers' intentions toward audience, the data do not show. None of the readers seemed to find the repetition at all distracting, even if they noticed it. What the statistical data do suggest is the importance of the high number of oral elements in the reports that received the highest responses. What, then, are some implications of this study? Can we make some

connections to theory, research, and pedagogy in technical writing?

IMPLICATIONS FOR THEORY

First, we can study the number and kinds of oral elements in various forms of technical communication. Although my study focused on reports, I believe there is much to study yet in manual writing, a type of writing we have reason to deplore more and more as more and more technological "progress" results in more and more "user" manuals, manuals too often not usable. There's more to be done in directions already taken by Walker Gibson, Rudolf Flesch, and other rhetoricians' studies on the relationship between speaking and writing (Liggett 334-44).

The second direction we might take follows from the first one about the effectiveness of orality in technical writing. Although many of us have drawn extensively on sentence combining theory, perhaps we should be combining such theory with coherence and cohesion strategies. We can learn more about Robert de Beaugrande's continuing work on coherence and cohesion, what he calls the "given-new contract." Do classroom strategies that focus on sentence combining in effect reduce cohesive ties because sentences too often are seen apart from their context? If so, should we be developing a combining theory that stresses cohesive ties rather than longer T-units?

Third, we can continue considering the importance of ethics in technical communication. Philip Rubens has

suggested that going to reading theorists like Louise Rosenblatt and philosophers like Michael Polanyi will help us see some implications of "openness" in technical communication. Going to theorists of the new rhetorics might help us to pay more attention to intentionality. (Not much on intention has been done, but Robert Scott's "Intentionality in the Rhetorical Process" may help point the way toward a new direction.) Rubens further argues that the character devaluation, conscious or unconscious, stemming from too much emphasis on objectivity in language is unethical. Not only does it isolate the writer--and too often the reader--from the text, it leads to "corporate anonymity" (329-39). Do we want our technological society's ethos to continue to be based on the closed systems of our fragmented worlds in which too many feel uncomfortable with the responsibility for their own words?

Georges Dusdorf in his philosophy of language as epistemic explores the implications between the objective language of technical writing on one end of a spectrum and pure expression on the other. Although objective language seems to say all, he tells us, "perhaps [this] language that says the most is after all the one that says the least--a language based on the objectivity of things but not on the personality of human beings, an inhuman language" (Speaking 66). If form degenerates into formula, style becomes empty imitation, a whole "jumble of conditioned responses,"

Gusdorf warns, "in which the person is the victim rather than the master" (75).

IMPLICATIONS FOR RESEARCH

Most research on the differences between speaking and writing has focused on expository writing. Adding technical writing to this ongoing research would open up some interesting areas and forms of empirical research. Does the most effective technical writing fall on a scale somewhere between oral and written language? If so, how would such research affect our methodology and our textbooks?

My research required professionals to read what I considered to be good, mostly conventional student reports. Would reader response have differed significantly if these seven professionals in varying disciplines had read examples of each other's writing? Would analyses of these examples suggest other implications? What would the differences be if the readers were a lay audience instead of professionals who had considerable or even complete knowledge of the subject matter for the majority of the reports?

What can we learn from intensive research into stylistic choices? One of the conclusions of Lee Odell's recent study of non-academic writers was that experienced writers make stylistic choices pertaining to persona twenty-one percent of the time as compared to fifty-three percent for the reader's anticipated response. But can we thus separate persona and expected response when both the writer's attitude toward subject and tone toward the reader

come out of a concern with reader response? There's much rich material awaiting intensive research into intentionality.

Besides these analytical implications, how would such research affect our textbooks? Bob Connors' study of technical communication textbooks concludes that technical writing may have become more inclusive and that there has been increasing use of personal pronouns and active voice; however, most textbooks today have gone not much further than the advice to sprinkle pronouns here and there and to avoid passive voice. Although several recent textbooks mention the rhetorical approach (and a few in-progress works sound promising), they still read like the handbooks of current-traditional rhetoric. Most textbooks, except in their letter writing sections with the formulaic "you attitude" approach to the reader, continue to separate the writer's voice from the rhetorical context. The textbooks that do mention voice, aside from passive or active, offer no models for voice analysis. One new textbook written by a professional technical writer has, however, taken an encouraging direction. The author not only projects the speaking voice of one who is making conscious connections of self to subject but also argues for oral elements in both the inventive process and the writing style (Price, Put That in Writing).

IMPLICATIONS FOR PEDAGOGY

That we need to consider technical writing as rhetorical not only in theory but in practice is the primary implication. Most of us, for instance, are now including more classroom practice in letter writing along with the conventional report writing. To many students the rhetorical context of letter writing is more apparent than other forms of technical communication; therefore, such practice is good preparation for (and study along with) report writing.

We could encourage our students to keep notebooks in which they transcribe and describe both their research efforts and their writing processes. Perhaps having the notebooks become an integral, though perhaps more subjective, part of their observation of themselves as writers would enable them to effectively connect self and subject in a completed report. They could observe, not as observers who are independent of the process but as observers who are participants in the process.

Dan Marder, Dorothy Guinn, and Merrill Whitburn have been emphasizing the rhetorical nature of technical communication, of attaching more attention to voice. But there have been few practical applications. In a recent NCTE collection, Herman Estrin describes a useful rhetorical approach to the teaching of technical writing. He describes how he has his engineers rhetorically analyze children's literature for style and voice, in particular noting the numerous figures of speech, parallel structure, strategies

of repetition. After completing the analyses, these engineers then write for an audience of children (132-35). Such attention to rhetorical context helps the engineers to become aware of the voices they project and what responses they create in their intended readers. Although not much has been done with metaphor, Douglas Catron argues convincingly that technical writers use metaphor as an inventive heuristic (69-78).

If we agree that technical communication has to arise from a rhetorical context, more of us could structure our classrooms along corporate lines where students worked in groups on actual projects, projects that students have autonomously chosen after close observation of buildings, land, systems, policies in their campus world, a world in which they already participate. They would then be in a real context that requires cooperation, sharing, and a participation in real situations--not the usual simulated textbook case studies--that sequential assignments could strengthen. Out of a real connection with real-world projects in which they participate because they have a real stake would come, I believe, real voices. Perhaps if enough students learned how to communicate in ways like this, we could at least envision a change in what we perceive as technology's ethos.

In closing I'd like to offer first a verbatim extract from an engineer's lab notebook that describes the first snow making outside the GE Research Lab and then the

philosophical stance of Georges Gusdorf on the language we all share.

"Curt flew into the cloud, and I started the dispenser in operation. I dropped about three pounds (of dry ice) and then swung around and headed south. About this time I looked toward the rear and was thrilled to see long streamers of snow falling from the base of the cloud through which we had just passed. I shouted to Curt to swing

around, and as we did so we passed through a mass of glistening snow crystals! We made another run through a dense portion of the unseeded cloud, during which time I dispensed about three more pounds of crushed dry ice. . . . This was done by opening the window and letting the suction of the passing air remove it. We then swung west of the cloud and observed draperies of snow which seemed to hang for 2-3000 feet below us and noted the cloud drying up rapidly, very similar to what we observe in the cold box in the laboratory. . . . While still in the cloud as we saw the glinting crystals all over, I turned to Curt, and we shook hands as I said, 'We <u>did</u> it!'"

Here the writer I think is projecting to others individual progress and potential worth. Historically, the report is significant because it was <u>used</u> for much of the subsequent theory and research in weather control. I suggest we can use more of this kind of writing in the contexts our technological world increasingly demands

of us so that we can reach across boundaries and understand not only what we say but who we are.

"The power of style . . . is not the privilege of poet alone," says Gusdorf. The writer discovers ideas by working over words, thus paying attention to both the real and oneself. The writer's concerns are "accuracy" and "integrity" (74-75)--to Gusdorf the philosophy of language, to Aristotle the ethical qualities of an effective communicator.

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